

Notice of Allowability

Application No.

10/673,172

Examiner

A. J. HEINZ

Applicant(s)

SASAKI ET AL.

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers filed 10/28/05 and 12/28/05.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 12/28/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

A. J. HEINZ
Primary Examiner
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EXAMINER'S AMENDMENT/COMMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. B. Young on 6 January 2005.

IN THE CLAIMS:

i) Claim 1 has been replaced by the following copy:

--A thin film magnetic head comprising a write element, wherein:

said write element comprises a first magnetic film, a pole portion, a second magnetic film, a gap film, a first coil and a second coil;

said first magnetic film has one flat surface;

said pole portion comprises a first pole portion and a second pole portion;

said first pole portion including at least one pole piece film lying on said flat surface of said first magnetic film, said at least one pole piece film having an upper end part narrowed to define a track width;

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said second pole portion faces said first pole portion with said gap film between them;

said second magnetic film is connected to said second pole portion and is joined to said first magnetic film by a back gap portion that is recessed in the thin film magnetic head from the medium-facing surface;

said first coil and said second coil surround in a spiral form said back gap portion on said flat surface of said first magnetic film, and one of said first and second coils is fitted into a space between coil turns of the other, insulated from the coil turns of the other coil and the at least one pole piece film by an insulating film, and said first and second coils are connected to each other so as to generate magnetic flux in the same direction;

one of said first coil and said second coil has coil turns with generally planar side surfaces extending generally transverse to the planes of the first magnetic film and one pole piece film wherein said side surfaces have taper angles making the sectional shape of the coil turns narrower in the lower part and wider in the upper part; and

upper surfaces of said first and second coils form the same plane.--;

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ii) Claim 12 has been replaced by the following copy:

--A magnetic recording/reproducing apparatus comprising a thin film magnetic head and a magnetic recording medium, said thin film magnetic head comprising a write element, wherein:

said write element comprises a first magnetic film, a pole portion, a second magnetic film, a gap film, a first coil and a second coil;

said first magnetic film has one flat surface;

said pole portion comprises a first pole portion and a second pole portion;

said first pole portion including at least one pole piece film lying on said flat surface of said first magnetic film, said at least one pole piece film having an upper end part narrowed to define a track width;

said second pole portion faces said first pole portion with said gap film between them;

said second magnetic film is connected to said second pole portion and is joined to said first magnetic film by a back gap portion that is recessed in the thin film magnetic head from the medium-facing surface;

said first coil and said second coil surround in a spiral form said back gap portion on said flat surface of said first

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magnetic film, and one of said first and second coils is fitted into a space between coil turns of the other, insulated from the coil turns of the other coil and the at least one pole piece film by an insulating film, and said first and second coils are connected to each other so as to generate magnetic flux in the same direction;

one of said first coil and said second coil has coil turns with generally planar side surfaces extending generally transverse to the planes of the first magnetic film and one pole piece film wherein said side surfaces have taper angles making the sectional shape of the coil turn narrower in the lower part and wider in the upper part;

upper surfaces of said first and second coils form the same plane; and

said magnetic recording medium performs magnetic recording/reproducing operations in cooperation with said thin film magnetic head.--; and

iii) Claims 23-32, which are directed to a non-elected invention, have been canceled.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. J. HEINZ whose telephone number is (571) 272-7587. The examiner can normally be reached on M-F 9:30-6:00.

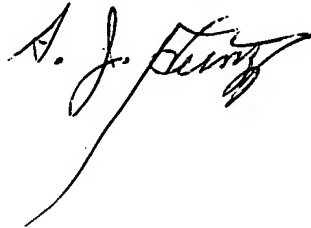
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM KORZUCH can be reached on (571)272-7589.

The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. J. HEINZ
Primary Examiner
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A handwritten signature in black ink, appearing to read 'A. J. Heinz', with a long, sweeping underline that extends to the left and then curves back towards the right.